

**ATTACHMENT A**
Remarks

Claims 7-24 are pending in the present application. By this Amendment, Applicants have amended claim 7 and added new claims 13-24. Applicants respectfully submit that the present application is in condition for allowance based on the discussion which follows.

Claims 7-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP-06-228570 (hereinafter "JP '570") in view of Masuda et al. (U.S. Patent No. 6,042,798) (hereinafter "Masuda") and Logsdon et al. (U.S. Patent No. 4,876,402) (hereinafter "Logsdon"). The Examiner alleges that JP '570 discloses a desulfurization process by contacting a raw hydrocarbon feed comprising methane, ethane, propane and butane with a catalyst comprising copper, zinc and nickel oxide in the presence of hydrogen. The Examiner acknowledges that JP '570 does not disclose the desulfurization step operated at a space velocity of 200 to 10,000 h⁻¹. However, the Examiner alleges that Masuda discloses a hydrodesulfurization process, wherein the process is operated at a space velocity of about 1,000 h⁻¹. Further, in the Response to Arguments section of the Office Action, the Examiner alleges that the previously claimed limitation, "desulfurization agent," would encompass anything that results in desulfurizing, including a desulfurizing catalyst.

In order to more clearly recite the present desulfurization agent, by this Amendment, Applicants have amended claim 7 to now recite that the desulfurizing method uses a sulfur-adsorption type desulfurizing agent manufactured by the recited method. As a result, the sulfur-adsorption type desulfurizing agent is further distinguishable from a desulfurizing catalyst. Support for the amendment to claim 7

may be found on page 17, lines 14-19 and page 20, lines 10-18 of the present specification.

Furthermore, the present amendment clarifies that the desulfurizing agents of the present invention are sulfur-adsorption type desulfurizing agents, which one of ordinary skill in the art would readily appreciate are distinguishable from a desulfurizing catalyst. Moreover, sulfur-adsorption type desulfurizing agents are well known in the art, e.g., references disclosing such agents, including U.S. Patent No. 4,884,396 and U.S. Patent Application Publication No. 2005/0173297. Accordingly, as now recited, the present desulfurizing method desulfurizes hydrocarbon when the desulfurizing agent, itself, adsorbs sulfur or sulfur compounds. As one of ordinary skill in the art would recognize, the composition of the desulfurizing agent changes by adsorption of sulfur and, thus, the present desulfurizing agent is clearly distinguishable from a so-called desulfurizing catalyst.

Turning now to the prior art, which was the subject of the outstanding rejections, Logsdon discloses an aldehyde hydrogenation catalyst. The aldehyde hydrogenation catalyst is nothing more than a catalyst, as one of ordinary skill in the art would understand. In contrast, the present desulfurizing agent desulfurizes hydrocarbon by adsorbing sulfur and, thus, the present desulfuring agent is not a catalyst. Accordingly, Logsdon fails to disclose the present desulfurizing agent.

Moreover, one of ordinary skill in the art would not have any reason to combine the disclosure of Logsdon with JP '570. Logsdon is directed to a completely different chemical reaction, namely aldehyde hydrogenation. Logsdon fails to provide any

disclosure which would lead one of ordinary skill in the art to believe its catalyst could be modified in any way to form the present sulfur-adsorption type desulfurizing agent.

Neither JP '570 nor Masuda discloses a method for producing a desulfurizing agent of the present invention. In this regard, although the Examiner states that Masuda discloses such a method, Masuda discloses a method of using a co-precipitation method, and does not disclose or in any way make obvious impregnating a shaped form with iron and/or nickel. Therefore, Masuda fails to anticipate or in any way make obvious the claimed impregnating process.

Furthermore, a person of ordinary skill in the art would have no reason to combine JP '570 and Masuda and, thus, would not be led to the present invention.

Moreover, Masuda fails to be prior art of the present application and, therefore, it is inappropriate to cite Masuda in a 35 U.S.C. § 103(a) rejection. Masuda is not prior art of the present application under 35 U.S.C. § 102(b), as the present application is a U.S. National Stage of PCT/JP99/00697, filed February 18, 1999. Masuda issued March 28, 2000 and, therefore, is not prior art under 35 U.S.C. § 102(b). Further, Masuda is not prior art under 35 U.S.C. §§ 102(a) or (e), as there is a common assignee of both Masuda and the present application; and the subject matter claimed, which is found in Masuda, is that of the present inventors and, therefore, not a disclosure of another, in accordance with 35 U.S.C. §§ 102(a) and 102(e). If necessary, Applicants will submit a Rule 132 Affidavit.

By this Amendment, Applicants have added new claims 13-24 with subject matter basis being found in the application as filed, including the claims as originally

filed, where claim 13 corresponds to original claim 1 and claims 16-23 correspond to claims 7-12.

Further, Applicants respectfully submit that the added claims are clear of the prior art. For example, claim 13 recites a method for producing a sulfur-adsorption type desulfurizing agent using a method distinguishable over the prior art. For example, although Logsdon discloses a method for producing an aldehyde hydrogenation catalyst, Logsdon fails to teach or in any way make obvious the present method, comprising the recited specific steps, resulting in the production of a sulfur-adsorption desulfurizing agent, which has recited properties in terms of adsorbing sulfur, as claimed. Further, Applicants respectfully submit that claims 16-23 are clear of the prior art for at least the same reasons as claims 7-12.

In view of the foregoing, Applicants respectfully submit that the present application is in condition for allowance.

END REMARKS